SEQUENCE LISTING

| <11 | .0> | Bier Mcal | | ska, er, | | | | | | | | | | | | |
|--------------------------|------------------|--------------------------|-------------------------|---------------------|------------------|------------------|------------------|-------------------|---------------------|------------------|------------------|------------------|------------------|------------------|-----------------------|-----|
| <12 | <0> | Nove | l Pr | eadi | росу | te F | 'actc | r-1- | Like | Pol | ypep | tide | s | | | |
| <13 | <0> | ARS. | 113 | | | | | | | | | | | | | |
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| <15 <15 | | US 6 2002 | | | 5 | | | | | | | | | | | |
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| <21 <21 <21 <21 | 1> 2> | 1 1663 DNA homo | sap | iens | | | | | | | | | | | | |
| <22 <22 <22 | 1> | CDS (122 |) (| 1180 |) | | | | | | | | | | | |
| <40) aga | - | l aac | gtgg | acagi | ga a | gaag | cgga | g gg _' | | gagg | | agag | gag | caca | cagatg | 60 |
| aago | cagg | tgt i | ccac | gegt | ac go | acca. | tcca | t cc | gtcc | gtcc | ctc | atgg | ggc | cggc | gctgac | 120 |
| c at Me 1 | tg c et P | cc a | gc g er G | gc to ly C; 5 | ge eq ys Ai | go to rg C | gc c ys L | tg ca eu Hi | at c is Le 10 | eu Va | tg to al C | go c ys L | tg t eu L | tg to eu C | gc att ys Ile 5 | 169 |
| ctg Leu | G] À āāā | gct Ala | ccc Pro 20 | ggt Gly | cag Gln | cct Pro | gtc Val | cga Arg 25 | gcc Ala | gat Asp | gac Asp | tgc Cys | agc Ser 30 | tcc Ser | cac His | 217 |
| tgt Cys | gac Asp | ctg Leu 35 | gcc Ala | cac His | ggc Gly | tgc Cys | tgt Cys 40 | gca Ala | cct Pro | gac Asp | ggc Gly | tcc Ser 45 | tgc Cys | agg Arg | tgt Cys | 265 |
| gac Asp | ccg Pro 50 | ggc Gly | tgg Trp | gag Glu | ggg Gly | ctg Leu 55 | cac His | tgt Cys | gag Glu | cgc Arg | tgt Cys 60 | gtg Val | agg Arg | atg Met | cct Pro | 313 |
| ggc Gly 65 | tgc Cys | cag Gln | cac His | ggt Gly | acc Thr 70 | tgc Cys | cac His | cag Gln | cca Pro | tgg Trp 75 | cag Gln | tgc Cys | atc Ile | tgc Cys | cac His 80 | 361 |
| agt Ser | ggc Gly | tgg Trp | gca [·] Ala | ggc Gly 85 | aag Lys | ttc Phe | tgt Cys | gac Asp | aaa Lys 90 | ggc Gly | ttc Phe | cat | Gly ggg | cgt Arg 95 | gac Asp | 409 |
| tgc | gag | cgc | aag | gct | gga | ccc | tgt | gaa | cag | gca | ggc | tcc | сса | tgc | cgc | 457 |

| ccc ctg cca cgt gac ttg ccc cct gag cct gga aag acc aca gca ctg Pro Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala Leu 340 345 350 | 1177 |
|---|------|
| tga tggaggtggg ggctttctgg cccccttcct cacctcttcc acccctcaga | 1230 |
| ctggagtggt ccgttctcac cacccttcag cttgggtaca cacacagagg agacctcagc | 1290 |
| ctcacaccag aaatattatt tttttaatac acagaatgta agatggaatt ttatcaaata | 1350 |
| aaactatgaa aatgcaagtg ggctcctatg ccagaaaaac ccacctggcg ttccagatgc | 1410 |
| aagagggcca gagcagaggc ctggttctgg ggaagcctca ggatgctgcc caccaaggag | 1470 |
| tgatttccaa agagtaatcc agggtgccct tttcccttct ggggaagtgt ggagaggtag | 1530 |
| agececagag gagaatgtaa acaageagee ageacetetg tataggeeeg geetggatea | 1590 |
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| ggactccctg ctg | 1663 |
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<213> homo sapiens

<400> 2

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20 25 30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys 35 40 45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro 50 55 60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His 65 70 75 80

Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Gly Phe His Gly Arg Asp 85 90 95

Cys Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg 100 105 110

Asn Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr 115 120 125

Cys Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val 130 135

Asp Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp 145 150 155 160

- Gly Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg 165 170 175
- Phe Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg 180 185 190
- Gly Ala Arg Cys Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro 195 200 205
- Ser Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp 210 215 220
- Pro Pro Thr Thr Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val 225 230 235 240
- Val Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu 245 250 255
- Arg Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu Gly
 260 265 270
- Glu Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala 275 280 285
- Leu Val Leu Ala Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Arg Gly
 290 295 300
- Val Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro 305 310 315 320
- Ala Cys Gln Asp Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu 325 330 335
- Pro Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala Leu 340 345 350
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- <400> 3
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 1 10 15
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- Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro Gly Cys Gln His 35 40 45
- Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His Ser Gly Trp Ala 50 55 60
- Gly Lys Phe Cys Asp Lys Gly Phe His Gly Arg Asp Cys Glu Arg Lys 65 70 75 80

- Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gln 85 90 95
- Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu 100 105 110
- Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu 115 120 125
- Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg 130 135 140
- Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile 145 150 150 160
- Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys 165 170 175
- Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly
 180 185 190
- Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp Pro Pro Thr Thr 195 200 205
- Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val Val Pro Ala Thr 210 215 220
- Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu Arg Ile Ser Val 225 230 235 240
- Lys Glu Val Val Arg Arg Glu Glu Ala Gly Leu Gly Glu Pro Ser Leu 245 250 255
- Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala Leu Val Leu Ala 260 265 270
- Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Gly Val Cys Pro Pro 275 280 285
- Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala Cys Gln Asp 290 295 300
- Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu Pro Leu Pro Arg 305 310 315 320
- Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala Leu 325 330
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- <211> 358
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- <400> 4
- Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile 1 5 10 15

Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys 4.0 Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Gly Phe His Gly Arg Asp 90 Cys Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr 120 Cys Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val 135 140 Asp Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp 150 Gly Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg 170 Phe Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro 200 Ser Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp Pro Pro Thr Thr Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val 230 235 Val Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu 245 250 Arg Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu Gly 265 Glu Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala 275 Leu Val Leu Ala Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Gly 295 300 Val Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro 315 Ala Cys Gln Asp Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu

325 330 335

Pro Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala Leu 340 345 350

His His His His His 355

<210> 5

<211> 321

<212> PRT

<213> homo sapiens

<400> 5

Met Pro Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile

5 10 15

Cys His Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile 20 25 30

Cys Thr Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp 35 40 45

Gly Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg 50 55 60

Asp Cys Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys 65 70 75 80

Arg Asn Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe 85 90 95

Thr Cys Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn 100 105 110

Val Asp Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu 115 120 125

Asp Gly Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly 130 135 140

Arg Phe Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln 145 150 155 160

Arg Gly Ala Arg Cys Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys 165 170 175

Pro Ser Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro 180 185 190

Asp Pro Pro Thr Thr Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val 195 200 205

Val Val Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu 210 215 220

Leu Arg Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu

225 230 235 240

Gly Glu Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala 245 250 255

Ala Leu Val Leu Ala Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Arg 260 265 270

Gly Val Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala 275 280 285

Pro Ala Cys Gln Asp Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly 290 295 300

Leu Pro Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala 305 310 315 320

Leu

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<211> 315

<212> PRT

<213> homo sapiens

<400> 6

Met Pro Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile
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Cys His Ser Gly Trp Ala Asp Glu His Ile Cys Thr Thr Gln Ser Pro 20 25 30

Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Gly Glu Tyr His 35 40 45

Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys Glu Arg Lys Ala 50 55 60

Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys 65 70 75 80

Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu Val 85 90 95

Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu Met 100 105 110

Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe 115 120 125

Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn 130 135 140

Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg 145 150 155 160

Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly 175

| | Thr | Cys | Glu 180 | Leu | Val | Leu | Pro | Val 185 | Pro | Asp | Pro | Pro | Thr 190 | Thr | Val | |
|---|--|--|--------------------------------|---|---------------------------------|---------------------------------|--------------------------------|---------------------------------------|---------------------------------------|---------------------------------|--------------------------|--------------------------------|--------------------------------|---------------------------------------|--------------------------|------------------|
| Asp | Thr | Pro 195 | Leu | Gly | Pro | Thr | Ser 200 | Ala | Val | Val | Val | Pro 205 | Ala | Thr | Gly | |
| Pro | Ala 210 | Pro | His | Ser | Ala | Gly 215 | Ala | Gly | Leu | Leu | Arg 220 | Ile | Ser | Val | Lys | |
| G1u 225 | Val | Val | Arg | Arg | Gln 230 | Glu | Ala | Gly | Leu | Gly 235 | Glu | Pro | Ser | Leu | Val 240 | |
| Ala | Leu | Val | Val | Phe 245 | Gly | Ala | Leu | Thr | Ala 250 | Ala | Leu | Val | Leu | Ala 255 | Thr | |
| Val | Leu | Leu | Thr 260 | Leu | Arg | Ala | Trp | Arg 265 | Arg | Gly | Val | Cys | Pro 270 | Pro | Gly | |
| Pro | Cys | Cys 275 | Tyr | Pro | Ala | Pro | His 280 | Tyr | Ala | Pro | Ala | Cys 285 | Gln | Asp | Gln | |
| Glu | Cys 290 | Gln | Val | Ser | Met | Leu 295 | Pro | Ala | Gly | Leu | Pro 300 | Leu | Pro | Arg | Asp | |
| Leu 305 | Pro | Pro | Glu | Pro | Gly 310 | Lys | Thr | Thr | Ala | Leu 315 | | | | | | |
| <210 <211 | 1> : | 7 L149 | | | | | | | | | | | | | | |
| <212 <213 | | AMC | sapi | iens | | | | | | | | | | | | |
| | 3> 1)> L> (| nomo CDS | sapi | | | | | | | | | | | | | |
| <221 <220 <221 <222 <400 | 3> 1 0> 1> 0 2> | nomo CDS (1) | . (113 | 31) | 0.00 | t-00 | ata | oot | at a | at a | taa | ata | *** | . | | 40 |
| <220 <220 <220 <220 <400 atg | 3> 1 0> 1> 0 2> 0> 7 | nomo CDS (1) | | 31) tgc | | | | | | | | | | | | 48 |
| <21: <22: <22: <22: <400 atg Met 1 ctg | 3> 1)> L> (2)> ccc Pro | CDS (1) agc Ser | . (113 ggc | tgc Cys 5 ggt | Arg cag | Cys cct | Leu gtc | His cga | Leu 10 gcc | Val gat | Cys gac | Leu | Leu agc | Cys 15 tcc | Ile cac | 4 8 96 |
| <223 <222 <222 <400 atg Met 1 ctg Leu | 3> H)> L> (2>) ccc Pro ggg Gly gac | CDS (1) agc ser gct Ala | gge Gly ccc Pro | tgc Cys 5 ggt Gly | Arg cag Gln ggc | Cys cct Pro | Leu gtc Val tgt | His ega Arg 25 gca | Leu 10 gcc Ala cct | Val gat Asp gac | Cys gac Asp ggc | tgc Cys | agc Ser 30 | Cys 15 tcc Ser agg | Ile cac His | |
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| | | gat Asp 85 | | | | | | | 288 |
|---|--|-------------------|--|------|--|--|--|---|-----|
| | | tgc Cys | | | | | | | 336 |
| | | ttc Phe | | | | | | | 384 |
| | | ggc Gly | | | | | | | 432 |
| | | gct Ala | | | | | | | 480 |
| | | tgt Cys 165 | | | | | | | 528 |
| | | gcc Ala | | | | | | | 576 |
| - | | ggc Gly | | | | | | - | 624 |
| | | cgc Arg | | | | | | | 672 |
| | | gac Asp | | | | | | | 720 |
| | | tta Leu 245 | | | | | | | 768 |
| | | acc Thr | | | | | | | 816 |
| | | Gly ggg | | | | | | | 864 |
| | | gag Glu | | | | | | | 912 |
| | | gcc Ala | | | | | | | 960 |

Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe Ser Cys 180 185 190

Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn Leu Asp

Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn Leu Asp 195 200 205

Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg Asp Arg 210 215 220

Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly Lys Thr 225 230 235 240

Cys Glu Leu Val Leu Pro Val Pro Asp Pro Pro Thr Thr Val Asp Thr 245 250 255

Pro Leu Gly Pro Thr Ser Ala Val Val Pro Ala Thr Gly Pro Ala 260 265 270

Pro His Ser Ala Gly Ala Gly Leu Leu Arg Ile Ser Val Lys Glu Val 275 280 285

Val Arg Arg Gln Glu Ala Gly Leu Gly Glu Pro Ser Leu Val Ala Leu 290 295 300

Val Val Phe Gly Ala Leu Thr Ala Ala Leu Val Leu Ala Thr Val Leu 305 310 315 320

Leu Thr Leu Arg Ala Trp Arg Arg Gly Val Cys Pro Pro Gly Pro Cys 325 330 335

Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala Cys Gln Asp Gln Glu Cys 340 345 350

Gln Val Ser Met Leu Pro Ala Gly Leu Pro Leu Pro Arg Asp Leu Pro 355 360 365

Pro Glu Pro Gly Lys Thr Thr Ala Leu 370 375

<210> 9

<211> 357

<212> PRT

<213> homo sapiens

<400> 9

Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His Cys Asp Leu Ala 1 5 10 15

His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys Asp Pro Gly Trp 20 25 30

Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro Gly Cys Gln His $35 \hspace{1cm} 40 \hspace{1cm} 45$

Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His Ser Gly Trp Ala 50 55 60

Asp Glu His Ile Cys Thr Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Glu Tyr His Cys Val Cys Leu Pro Gly 90 Phe His Gly Arg Asp Cys Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala 105 Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu Val Gly Phe Val Gly Ala Arg 135 Cys Glu Val Asn Val Asp Asp Cys Leu Met Arg Pro Cys Ala Asn Gly 150 155 Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser 185 Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg Asp Arg Val His Asp Phe 195 200 Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val 215 220 Leu Pro Val Pro Asp Pro Pro Thr Thr Val Asp Thr Pro Leu Gly Pro 225 230 235 Thr Ser Ala Val Val Pro Ala Thr Gly Pro Ala Pro His Ser Ala 250 Gly Ala Gly Leu Leu Arg Ile Ser Val Lys Glu Val Val Arg Arg Gln 265 Glu Ala Gly Leu Gly Glu Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala Leu Val Leu Ala Thr Val Leu Leu Thr Leu Arg 295 300 Ala Trp Arg Arg Gly Val Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala 305 310 315 320 Pro His Tyr Ala Pro Ala Cys Gln Asp Gln Glu Cys Gln Val Ser Met 325 330 Leu Pro Ala Gly Leu Pro Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly 340 Lys Thr Thr Ala Leu 355

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<212> PRT

<213> homo sapiens

<400> 10

Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile 1 5 10 15

Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His 20 25 30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys 35 40 45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro 50 60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His 65 70 75 80

Ser Gly Trp Ala Asp Glu His Ile Cys Thr Thr Gln Ser Pro Cys Gln 85 90 95

Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Gly Glu Tyr His Cys Val 100 105 110

Cys Leu Pro Gly Phe His Gly Arg Asp Cys Glu Arg Lys Ala Gly Pro 115 120 125

Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys Gln Asp 130 135 140

Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu Val Gly Phe 145 150 155 160

Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu Met Arg Pro 165 170 175

Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe Ser Cys 180 185 190

Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn Leu Asp 195 200 205

Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg Asp Arg 210 215 220

Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly Lys Thr 225 230 235 240

Cys Glu Leu Val Leu Pro Val Pro Asp Pro Pro Thr Thr Val Asp Thr 245 250 255

Pro Leu Gly Pro Thr Ser Ala Val Val Pro Ala Thr Gly Pro Ala 260 265 270

Pro His Ser Ala Gly Ala Gly Leu Leu Arg Ile Ser Val Lys Glu Val 275 280 285

| Val | Arg 290 | Arg | Gln | Glu | Ala | Gly 295 | Leu | Gly | Glu | Pro | Ser 300 | Leu | Val | Ala | Leu | |
|---|--|--|--|---|--|--|------------------------------------|---|---|---|--|--|--|---|--------------------------------|------------------|
| Val 305 | Val | Phe | Gly | Ala | Leu 310 | Thr | Ala | Ala | Leu | Val 315 | Leu | Ala | Thr | Val | Leu 320 | |
| Leu | Thr | Leu | Arg | Ala 325 | Trp | Arg | Arg | Gly | Val 330 | Cys | Pro | Pro | Gly | Pro 335 | Cys | |
| Cys | Tyr | Pro | Ala 340 | Pro | His | Туг | Ala | Pro 345 | Ala | Суѕ | Gln | Asp | Gln 350 | Glu | Cys | |
| Gln | Val | Ser 355 | Met | Leu | Pro | Ala | Gly 360 | Leu | Pro | Leu | Pro | Arg 365 | Asp | Leu | Pro | |
| Pro | Glu 370 | Pro | Gly | Lys | Thr | Thr 375 | Ala | Leu | His | His | His 380 | His | His | His | | |
| <210 <211 <211 <211 | 1> 4 2> I | 11 420 DNA nomo | sapi | iens | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | |
| | 0> : ccc Pro | | | tgc | | | | | | | | | | | | 48 |
| atg Met 1 ctg | ccc | agc Ser gct | Gly | tgc Cys 5 ggt | Arg cag | Cys | Leu | His cga | Leu 10 gcc | Val gat | Cys | Leu tgc | Leu | Cys 15 tcc | Ile cac | 48 96 |
| atg Met 1 ctg Leu | ccc Pro | agc Ser gct Ala | CCC Pro 20 gcc Ala | tgc Cys 5 ggt Gly cac His | Arg cag Gln ggc | cct Pro | gtc Val tgt Cys | His cga Arg 25 gca Ala | Leu 10 gcc Ala cct Pro | Val gat Asp gac Asp | Cys gac Asp ggc Gly | tgc Cys tcc Ser | agc Ser 30 tgc Cys | Cys 15 tcc Ser | Ile cac His | |
| atg Met 1 ctg Leu tgt Cys | ccc Pro ggg Gly gac | agc Ser gct Ala ctg Leu 35 | Gly ccc Pro 20 gcc Ala | tgc Cys 5 ggt Gly cac His | Arg cag Gln ggc Gly | cct Pro tgc Cys | tgt Cys 40 | His cga Arg 25 gca Ala | Leu 10 gcc Ala cct Pro | Val gat Asp gac Asp | Cys gac Asp ggc Gly | tgc Cys tcc Ser 45 | agc Ser 30 tgc Cys | Cys 15 tcc ser agg Arg | Cac His tgt Cys | 96 |
| atg Met 1 ctg Leu tgt Cys gac Asp | ggg Gly gac Asp | agc Ser gct Ala ctg Leu 35 ggc Gly | Gly ccc Pro 20 gcc Ala tgg Trp | tgc Cys 5 ggt Gly cac His gag Glu | Arg cag Gln ggc Gly ggg Gly acc | cct Pro tgc Cys ctg Leu 55 | tgt Cys 40 cac | Cga Arg 25 gca Ala tgt Cys | Leu 10 gcc Ala cct Pro gag Glu | yal gat Asp gac Asp cgc Arg | gac Asp ggc Gly tgt Cys 60 | tgc Cys tcc Ser 45 gtg Val | agc Ser 30 tgc Cys agg Arg | Cys 15 tcc ser agg Arg atg Met | cac His tgt Cys | 96 144 |
| atg Met 1 ctg Leu tgt Cys gac Asp | ggg Gly gac Asp ccg Pro 50 | agc Ser gct Ala ctg Leu 35 ggc Gly cag Gln | Gly ccc Pro 20 gcc Ala tgg Trp cac His | tgc Cys 5 ggt Gly cac His gag Glu ggt Gly | Arg cag Gln ggc Gly ggg Gly acc Thr 70 aag | cct Pro tgc Cys ctg Leu 55 tgc Cys | Leu gtc Val tgt Cys 40 cac His cac | His cga Arg 25 gca Ala tgt Cys cag Gln | Leu 10 gcc Ala cct Pro gag Glu cca Pro | yal gat Asp gac Asp cgc Arg tgg Trp 75 | gac Asp ggc Gly tgt Cys 60 cag Gln | tgc Cys tcc Ser 45 gtg Val tgc Cys | agc Ser 30 tgc Cys agg Arg | Cys 15 tcc Ser agg Arg atg Met tgc Cys | cac His cct Pro cac His 80 acc | 96 144 192 |

ggt gag tac cat tgt gtg tgc tta cca ggc ttc cat ggg cgt gac tgc 384 Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys 115 120 125

gag cgc aag gct gga ccc caccatcacc atcaccat 420 Glu Arg Lys Ala Gly Pro 130

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<211> 134

<212> PRT

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Met Pro Ser Gly Cys Arg Cys Leu His Leu Val Cys Leu Leu Cys Ile 5 10 15

Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His 20 25 30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys 35 40 45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro 50 55 60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His 65 70 75 80

Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr 85 90 95

Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly 100 105 110

Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys 115 120 125

Glu Arg Lys Ala Gly Pro 130

<210> 13

<211> 114

<212> PRT

<213> homo sapiens

<400> 13

Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His Cys Asp Leu Ala 1 5 10 15

His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys Asp Pro Gly Trp

Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro Gly Cys Gln His
35 40 45

Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His Ser Gly Trp Ala 50 55 60

Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr Thr Gln Ser Pro 65 70 75 80

Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Glu Tyr His 85 90 95

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Gly Pro

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<213> homo sapiens

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Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys 35 40 45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro 50 55 60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His 65 70 75 80

Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr 85 90 95

Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly 100 105 110

Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys 115 120 125

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| ctg Leu | ggg Gly | gct Ala | ccc Pro 20 | ggt Gly | cag Gln | cct Pro | gtc Val | cga Arg 25 | gcc Ala | gat Asp | gac Asp | tgc Cys | agc Ser 30 | tcc Ser | cac His | 96 |
| tgt Cys | gac Asp | ctg Leu 35 | gcc Ala | cac His | ggc Gly | tgc Cys | tgt Cys 40 | gca Ala | act Pro | gac Asp | ggc Gly | tcc Ser 45 | tgc Cys | agg Arg | tgt Cys | 144 |
| gac Asp | ccg Pro 50 | ggc Gly | tgg Trp | gag Glu | ggg Gly | ctg Leu 55 | cac His | tgt Cys | gag Glu | ege Arg | tgt Cys 60 | gtg Val | agg Arg | atg Met | cct Pro | 192 |
| ggc Gly 65 | tgc Cys | cag Gln | cac His | ggt Gly | acc Thr 70 | tgc Cys | cac His | cag Gln | cca Pro | tgg Trp 75 | cag Gln | tgc Cys | atc Ile | tgc Cys | cac His 80 | 240 |
| | | | gca Ala | | | | | | | | | | | | | 288 |
| acg Thr | cag Gln | tcc Ser | ccc Pro 100 | tgc Cys | cag Gln | aat Asn | gga Gly | ggc Gly 105 | cag Gln | tgc Cys | atg Met | tat Tyr | gac Asp 110 | Gly ggg | ggc Gly | 336 |
| ggt Gly | gag Glu | tac Tyr 115 | cat His | tgt Cys | gtg Val | tgc Cys | tta Leu 120 | cca Pro | ggc Gly | ttc Phe | cat His | ggg Gly 125 | cgt Arg | gac Asp | tgc Cys | 384 |
| | | | gct Ala | | | | | | | | | | | | | 432 |
| ggc Gly 145 | gly ggg | cag Gln | tgc Cys | cag Gln | gac Asp 150 | gac Asp | cag Gln | ggc Gly | ttt Phe | gct Ala 155 | ctc Leu | aac Asn | ttc Phe | acg Thr | tgc Cys 160 | 480 |
| cgc Arg | tgc Cys | ttg Leu | gtg Val | ggc Gly 165 | ttt Phe | gtg Val | ggt Gly | gcc Ala | cgc Arg 170 | tgt Cys | gag Glu | gta Val | aat Asn | gtg Val 175 | gat Asp | 528 |
| gac Asp | tgc Cys | ctg Leu | atg Met 180 | cgg Arg | cct Pro | tgt Cys | gct Ala | aac Asn 185 | ggt Gly | gcc Ala | acc Thr | tgc Cys | ctt Leu 190 | gac Asp | ggc Gly | 576 |
| | | | ttc Phe | | | | | | | | | | | | | 624 |
| tgc Cys | acc Thr 210 | atc Ile | aac Asn | ctg Leu | gat Asp | gac Asp 215 | tgt Cys | gcc Ala | agc Ser | cgc Arg | cca Pro 220 | tgc Cys | cag Gln | aga Arg | Gly ggg | 672 |

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| gcc Ala 225 | cgc Arg | tgt Cys | cgg Arg | gac Asp | cgt Arg 230 | gtc Val | cac His | gac Asp | ttc Phe | gac Asp 235 | tgc Cys | ctc Leu | tgc Cys | ccc Pro | agt Ser 240 | 720 |
| ggc Gly | tat Tyr | ggt Gly | ggc Gly | aag Lys 245 | acc Thr | tgt Cys | gag Glu | ctt Leu | gtc Val 250 | tta Leu | cct Pro | gtc Val | cca Pro | gac Asp 255 | ccc Pro | 768 |
| cca Pro | acc Thr | aca Thr | gtg Val 260 | gac Asp | acc Thr | cct Pro | cta Leu | ggg Gly 265 | ccc Pro | acc Thr | tca Ser | gct Ala | gta Val 270 | gtg Val | gta Val | 816 |
| cct Pro | gcc Ala | acg Thr 275 | Gly gaa | cca Pro | gcc Ala | ccc Pro | cac His 280 | agc Ser | gca Ala | Gly Ggg | gct Ala | ggt Gly 285 | ctg Leu | ctg Leu | cgg Arg | 864 |
| atc Ile | tca Ser 290 | gtg Val | aag Lys | gag Glu | gtg Val | gtg Val 295 | cgg Arg | agg Arg | caa Gln | gag Glu | gct Ala 300 | Gly ggg | cta Leu | ggt Gly | gag Glu | 912 |
| cct Pro 305 | agc Ser | ttg Leu | gtg Val | gcc Ala | ctg Leu 310 | gtg Val | gtg Val | ttt Phe | Gly | gcc Ala 315 | ctc Leu | act Thr | gct Ala | gcc Ala | ctg Leu 320 | 960 |
| gtt Val | ctg Leu | gct Ala | act Thr | gtg Val 325 | ttg Leu | ctg Leu | acc Thr | ctg Leu | agg Arg 330 | gcc Ala | tgg Trp | cgc Arg | cgg Arg | ggt Gly 335 | gtc Val | 1008 |
| | | cct Pro | | | | | | | | | | | | | | 1056 |
| tgc Cys | cag Gln | gac Asp 355 | cag Gln | gag Glu | tgt Cys | cag Gln | gtt Val 360 | agc Ser | atg Met | ctg Leu | cca Pro | gca Ala 365 | GJA aaa | ctc Leu | ccc Pro | 1104 |
| | Pro | cgt Arg | Asp | Leu | Pro | Pro | Glu | | | Lys | | | | | | 1149 |
| caco | atca | icc a | itcac | cat | | | | | | | | | | | | 1167 |
| <210 <211 <212 <213 | .> 3 !> F | .6 883 PRT | sapi | en <i>s</i> | | | | | | | | | | | | |
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| Leu | Gly | Ala | Pro 20 | Gly | Gln | Pro | Val | Arg 25 | Ala | Asp | Asp | Cys | Ser 30 | Ser | His | |
| Cys | | Leu 35 | Ala | His | Gly | Cys | Cys 40 | Ala | Pro | Asp | Gly | Ser 45 | Cys | Arg | Cys | |

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His 70 Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn 135 Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys 160 Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val Asp 170 Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly 190 Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe 195 200 Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly 215 Ala Arg Cys Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp Pro 250 Pro Thr Thr Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu Arg 280 Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu Gly Glu 290 295 Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala Leu 310 Val Leu Ala Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Arg Gly Val Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala 345 Cys Gln Asp Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu Pro 355 365

Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala Leu 370 375 380

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- Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro Gly Cys Gln His $35 \hspace{1cm} 40 \hspace{1cm} 45$
- Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His Ser Gly Trp Ala 50 55 60
- Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr Thr Gln Ser Pro 65 70 75 80
- Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Glu Tyr His
 85 90 95
- Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys Glu Arg Lys Ala 100 105 110
- Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys 115 120 125
- Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu Val 130 135 140
- Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu Met 145 150 155 160
- Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe
 165 170 175
- Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn 180 185 190
- Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg 195 200 205
- Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly 210 215 220
- Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp Pro Pro Thr Thr Val 225 230 235 240
- Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val Pro Ala Thr Gly 245 250 255

Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu Arg Ile Ser Val Lys 260 265 270

- Glu Val Val Arg Arg Gln Glu Ala Gly Leu Gly Glu Pro Ser Leu Val 275 280 285
- Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala Leu Val Leu Ala Thr 290 295 300
- Val Leu Leu Thr Leu Arg Ala Trp Arg Arg Gly Val Cys Pro Pro Gly 305 310 315 320
- Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala Cys Gln Asp Gln 325 330 335
- Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu Pro Leu Pro Arg Asp 340 345 350
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- Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys 35 40 45
- Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro 50 55 60
- Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His 65 70 75 80
- Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr 85 90 95
- Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly 100 105 110
- Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys 115 120 125
- Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn 130 135 140
- Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys 145 150 155 160

- Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu 190 Gly Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe
- Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly 210 215 220
- Ala Arg Cys Arg Asp Arg Val His Asp Phe Asp Cys Leu Cys Pro Ser 225 230 235 240
- Gly Tyr Gly Gly Lys Thr Cys Glu Leu Val Leu Pro Val Pro Asp Pro 245 250 255
- Pro Thr Thr Val Asp Thr Pro Leu Gly Pro Thr Ser Ala Val Val 260 265 270
- Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu Leu Arg 275 280 285
- Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu Gly Glu 290 295 300
- Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala Ala Leu 305 310 315 320
- Val Leu Ala Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Arg Gly Val
 325 330 335
- Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala Pro Ala 340 345 350
- Cys Gln Asp Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly Leu Pro 355 360 365
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His His His His His 385

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- <211> 37
- <212> DNA
- <213> Artificial sequence
- <220>
- <223> SCS0009SV3-EX1 primer
- <400> 19
- aagcaggett egecaceatg eecagegget geegetg

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| <400> | 26 | |
| tgtaaa | acga cggccagt | 18 |
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| <210> | 27 | |
| <211> | 18 | |
| <212> | DNA | |
| <213> | Artificial sequence | |
| <220> | | |
| <223> | M13REV primer | |
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| <400> | 27 | |
| caggaaa | acag ctatgacc | 18 |
| | | |
| <210> | 28 | |
| <211> | 20 | |
| <212> | DNA | |
| <213> | Artificial sequence | |
| <220> | | |
| <223> | T7 primer | |
| <400> | 28 | |
| taataco | gact cactataggg | 20 |
| | | |
| | 29 | |
| <211> | 18 | |
| <212> | DNA | |
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| <223> | SP6 primer | |
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| atttago | tga cactatag | 1.8 |

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accatgocca goggotgocg otgoctgoat otog
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agtcacgccc atggaagcct ttgtcacaga acttgc
                                                                     36
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| gca | agtt | ctg | tgac | aaaq | ggc t | tcca | tggg | ıc gt | gact | gc | | | | | | 38 |
| <21 <21 <21 <21 | 1> 2> | 35 39 DNA Arti | fici | al s | eque | nce | | | | | | | | | | |
| <22 <22 | | SCS0 | 009- | AP4 | prim | er | | | | | | | | | | |
| <40 tca | | 35 gct | gtgg | tctt | te c | aggc | tcag | a aa | gcaa | gtc | | | | | | 39 |
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| <400 gtga | | 37 tga 1 | tggt | gcag. | tg c | tgtg | gtct | t to | cag | | | | | | | 35 |
| <210 <211 <212 <213 | L> 2> | 38 385 PRT Mus 1 | nuscu | ulus | | | | | | | | | | | | |
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| Met 1 | Ile | Ala | Thr | Gly 5 | Ala | Leu | Leu | Arg | Val 10 | Leu | Leu | Leu | Leu | Leu 15 | Ala | |
| Phe | Gly | His | Ser 20 | Thr | Туг | Gly | Ala | Glu 25 | Cys | Asp | Pro | Pro | Cys 30 | Asp | Pro | |
| Gln | Tyr | Gly 35 | Phe | Cys | Glu | Ala | Asp 40 | Asn | Val | Cys | Arg | Cys 45 | His | Val | Gly | |
| Trp | Glu 50 | Gly | Pro | Leu | Cys | Asp 55 | Lys | Cys | Val | Thr | Ala 60 | Pro | Gly | Cys | Val | |
| Asn | Gly | Val | Cys | Lys | Glu | Pro | Trp | Gln | Cys | Ile | Cys | Lys | Asp | Gly | Trp | |

| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asp | Gly | Lys | Phe | Cys 85 | Glu | Ile | Asp | Val | Arg 90 | Ala | Cys | Thr | Ser | Thr 95 | Pro |
| Cys | Ala | Asn | Asn 100 | Gly | Thr | Cys | Val | Asp 105 | Leu | Glu | Lys | Gly | Gln 110 | Tyr | Glu |
| Cys | Ser | Cys 115 | Thr | Pro | Gly | Phe | Ser 120 | Gly | Lys | Asp | Cys | Gln 125 | His | Lys | Ala |
| Gly | Pro 130 | Cys | Val | Ile | Asn | Gly 135 | Ser | Pro | Cys | Gln | His 140 | Gly | Gly | Ala | Cys |
| Val 145 | Asp | Asp | Glu | Gly | Gln 150 | Ala | Ser | His | Ala | Ser 155 | Cys | Leu | Cys | Pro | Pro 160 |
| Gly | Phe | Ser | Gly | Asn 165 | Phe | Cys | Glu | Ile | Val 170 | Ala | Ala | Thr | Asn | Ser 175 | Cys |
| Thr | Pro | Asn | Pro 180 | Cys | Glu | Asn | Asp | Gly 185 | Val | Cys | Thr | Asp | Ile 190 | Gly | Gly |
| Asp | Phe | Arg 195 | Суз | Arg | Cys | Pro | Ala 200 | Gly | Phe | Val | Asp | Lys 205 | Thr | Суз | Ser |
| Arg | Pro 210 | Val | Ser | Asn | Cys | Ala 215 | Ser | Gly | Pro | Cys | Gln 220 | Asn | Gly | Gly | Thr |
| Cys 225 | Leu | Gln | His | Thr | Gln 230 | Val | Ser | Phe | Glu | Cys 235 | Leu | Cys | Lys | Pro | Pro 240 |
| Phe | Met | Gly | Pro | Thr 245 | Cys | Ala | Lys | Lys | Arg 250 | Gly | Ala | Ser | Pro | Val 255 | Gln |
| Val | Thr | His | Leu 260 | Pro | Ser | Gly | Tyr | Gly 265 | Leu | Thr | Tyr | Arg | Leu 270 | Thr | Pro |
| Gly | Val | His 275 | Glu | Leu | Pro | Val | Gln 280 | Gln | Pro | Glu | Gln | His 285 | Ile | Leu | Lys |
| Val | Ser 290 | Met | Lys | Glu | Leu | Asn 295 | Lys | Ser | Thr | Pro | Leu 300 | Leu | Thr | Glu | Gly |
| Gln 305 | Ala | Ile | Cys | Phe | Thr 310 | Ile | Leu | Gly | Val | Leu 315 | Thr | Ser | Leu | Val | Val 320 |
| Leu | Gly | Thr | Val | Ala 325 | Ile | Val | Phe | Leu | Asn 330 | Lys | Cys | Glu | Thr | Trp 335 | Val |
| Ser | Asn | Leu | Arg 340 | Tyr | Asn | His | Thr | Phe 345 | Arg | Lys | Lys | Lys | Asn 350 | Leu | Leu |
| Leu | Gln | Tyr 355 | Asn | Ser | Gly | Glu | Glu 360 | Leu | Ala | Val | Asn | Ile 365 | Ile | Phe | Pro |
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<400> 39

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20 25 30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys 35 40 45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro 50 55 60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His 65 70 75 80

Ser Gly Trp Ala Asp Glu His Ile Cys Thr Thr Gln Ser Pro Cys Gln 85 90 95

Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly Gly Glu Tyr His Cys Val 100 105 110

Cys Leu Pro Gly Phe His Gly Arg Asp Cys Glu Arg Lys Ala Gly Pro 115 120 125

Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn Gly Gly Gln Cys Gln Asp 130 135 140

Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys Arg Cys Leu Val Gly Phe 145 150 155 160

Val Gly Ala Arg Cys Glu Val Asn Val Asp Asp Cys Leu Met Arg Pro 165 170 175

Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly Ile Asn Arg Phe Ser Cys 180 185 190

Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe Cys Thr Ile Asn Leu Asp 195 200 205

Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly Ala Arg Cys Arg Asp Arg 210 215 220

Val His Asp Phe Asp Cys Leu Cys Pro Ser Gly Tyr Gly Gly Lys Thr 225 230 235 240

Cys Glu Leu Val Leu Pro Val Pro Asp Pro Pro Thr Thr Val Asp Thr 245 250 255

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Pro His Ser Ala Gly Ala Gly Leu Leu Arg Ile Ser Val Lys Glu Val 275 280 285

Val Arg Arg Gln Glu Ala 290

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Leu Gly Ala Pro Gly Gln Pro Val Arg Ala Asp Asp Cys Ser Ser His 20 25 30

Cys Asp Leu Ala His Gly Cys Cys Ala Pro Asp Gly Ser Cys Arg Cys
35 40 45

Asp Pro Gly Trp Glu Gly Leu His Cys Glu Arg Cys Val Arg Met Pro 50 55 60

Gly Cys Gln His Gly Thr Cys His Gln Pro Trp Gln Cys Ile Cys His 65 70 75 80

Ser Gly Trp Ala Gly Lys Phe Cys Asp Lys Asp Glu His Ile Cys Thr 85 90 95

Thr Gln Ser Pro Cys Gln Asn Gly Gly Gln Cys Met Tyr Asp Gly Gly 100 105 110

Gly Glu Tyr His Cys Val Cys Leu Pro Gly Phe His Gly Arg Asp Cys 115 120 125

Glu Arg Lys Ala Gly Pro Cys Glu Gln Ala Gly Ser Pro Cys Arg Asn 130 135 140

Gly Gly Gln Cys Gln Asp Asp Gln Gly Phe Ala Leu Asn Phe Thr Cys 145 150 155 160

Arg Cys Leu Val Gly Phe Val Gly Ala Arg Cys Glu Val Asn Val Asp 165 170 175

Asp Cys Leu Met Arg Pro Cys Ala Asn Gly Ala Thr Cys Leu Asp Gly 180 185 190

Ile Asn Arg Phe Ser Cys Leu Cys Pro Glu Gly Phe Ala Gly Arg Phe 195 200 205

Cys Thr Ile Asn Leu Asp Asp Cys Ala Ser Arg Pro Cys Gln Arg Gly 210 215 220

| Ala 225 | Arg | Cys | Arg | Asp | Arg 230 | Val | His | Asp | Phe | Asp 235 | Cys | Leu | Cys | Pro | Ser 240 | |
|--------------------------|------------|---------------------------|-------------------|-----------------|------------|------------|-------------------|-------------------|------------------|------------|------------|-------------------|-------------------|------------------|------------|-----|
| Gly | Tyr | Gly | Gly | Lys 245 | Thr | Cys | Glu | Leu | Val 250 | Leu | Pro | Val | Pro | Asp 255 | Pro | |
| Pro | Thr | Thr | Val 260 | Asp | Thr | Pro | Leu | Gly 265 | Pro | Thr | Ser | Ala | Val 270 | Val | Val | |
| Pro | Ala | Thr 275 | Gly | Pro | Ala | Pro | His 280 | Ser | Ala | Gly | Ala | Gly 285 | Leu | Leu | Arg | |
| Ile | Ser 290 | Val | Lys | Glu | Val | Val 295 | Arg | Arg | Gln | Glu | Ala 300 | | | | | |
| <21 <21 <21 <21 | 1> 2> : | 41 1131 DNA Homo | sapi | ìens | | | | | | | | | | | | |
| <22) <22; <22; | 1> | exon | . (113 | 31) | | | | | | | | | | | | |
| <400 atg Met 1 | ccc | 41 agc Ser | ggc Gly | tgc Cys 5 | cgc Arg | tgc Cys | ctg Leu | cat His | ctc Leu 10 | gtg Val | tgc Cys | ctg Leu | ttg Leu | tgc Cys 15 | att Ile | 48 |
| | | gct Ala | | | | | | | | | | | | | | 96 |
| tgt Cys | gac Asp | ctg Leu 35 | gcc Ala | cac His | ggc Gly | tgc Cys | tgt Cys 40 | gca Ala | cct Pro | gac Asp | ggc Gly | tcc Ser 45 | tgc Cys | agg Arg | tgt Cys | 144 |
| | | ggc Gly | | | | | | | | | | | | | | 192 |
| | | cag Gln | | | | | | | | | | | | | | 240 |
| | | tgg Trp | | | | | | | | | | | | | | 288 |
| aat Asn | gga Gly | ggc Gly | cag Gln 100 | tgc Cys | atg Met | tat Tyr | gac Asp | ggg Gly 105 | ggc Gly | ggt Gly | gag Glu | tac Tyr | cat His 110 | tgt Cys | gtg Val | 336 |
| tgc Cys | tta Leu | cca Pro 115 | ggc Gly | ttc Phe | cat His | Gly | cgt Arg 120 | gac Asp | tgc Cys | gag Glu | cgc Arg | aag Lys 125 | gct Ala | gga Gly | ccc Pro | 384 |

| | | | | | | | | | 32 | | | | | | | ARS.113 |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------|
| tgt Cys | gaa Glu 130 | Gln | gca Ala | ggc Gly | tcc Ser | cca Pro 135 | tgc Cys | cgc Arg | aat Asn | ggc | ggg Gly 140 | Gln | tgc Cys | cag Gln | gac Asp | 432 |
| gac Asp 145 | Gln | ggc | ttt Phe | gct Ala | ctc Leu 150 | aac Asn | ttc Phe | acg Thr | tgc Cys | cgc Arg 155 | tgc Cys | ttg Leu | gtg Val | ggc | ttt Phe 160 | 480 |
| gtg Val | ggt Gly | gcc Ala | cgc Arg | tgt Cys 165 | gag Glu | gta Val | aat Asn | gtg Val | gat Asp 170 | gac Asp | tgc Cys | ctg Leu | atg Met | cgg Arg 175 | cct Pro | 528 |
| tgt Cys | gct Ala | aac Asn | ggt Gly 180 | gcc Ala | acc Thr | tgc Cys | ctt Leu | gac Asp 185 | ggc Gly | ata Ile | aac Asn | cgc Arg | ttc Phe 190 | tcc Ser | tgc Cys | 576 |
| ctc Leu | tgt Cys | cct Pro 195 | gag Glu | ggc Gly | ttt Phe | gct Ala | gga Gly 200 | ege Arg | ttc Phe | tgc Cys | acc Thr | atc Ile 205 | aac Asn | ctg Leu | gat Asp | 624 |
| gac Asp | tgt Cys 210 | gcc Ala | agc Ser | cgc Arg | cca Pro | tgc Cys 215 | cag Gln | aga Arg | ggg ggg | gcc Ala | cgc Arg 220 | tgt Cys | cgg Arg | gac Asp | cgt Arg | 672 |
| gtc Val 225 | cat His | gac Asp | ttc Phe | gac Asp | tgc Cys 230 | ctc Leu | tgc Cys | ccc Pro | agt Ser | ggc Gly 235 | tat Tyr | ggt Gly | ggc Gly | aag Lys | act Thr 240 | 720 |
| tgt Cys | gag Glu | ctt Leu | gtc Val | tta Leu 245 | cct Pro | gtc Val | cca Pro | gac Asp | cac Pro 250 | cca Pro | acc Thr | aca Thr | gtg Val | gac Asp 255 | acc Thr | 768 |
| cct Pro | cta Leu | Gly ggg | ccc Pro 260 | acc Thr | tca Ser | gct Ala | gta Val | gtg Val 265 | gta Val | cct Pro | gcc Ala | acg Thr | ggg Gly 270 | cca Pro | gcc Ala | 816 |
| ccc Pro | cac His | agc Ser 275 | gca Ala | ggg Gly | Ala | Gly | ctg Leu 280 | Leu | cgg Arg | atc Ile | Ser | gtg Val 285 | aag Lys | gag Glu | gtg Val | 864 |
| gtg Val | cgg Arg 290 | agg Arg | caa Gln | gag Glu | gct Ala | 999 Gly 295 | cta Leu | ggt Gly | gag Glu | cct Pro | agc Ser 300 | ttg Leu | gtg Val | gcc Ala | ctg Leu | 912 |
| gtg Val 305 | gtg Val | ttt Phe | Gly ggg | gcc Ala | ctc Leu 310 | act Thr | gct Ala | gcc Ala | ctg Leu | gtt Val 315 | ctg Leu | gct Ala | act Thr | gtg Val | ttg Leu 320 | 960 |
| ctg Leu | acc Thr | ctg Leu | agg Arg | gcc Ala 325 | tgg Trp | ege Arg | cgg Arg | ggt Gly | gtc Val 330 | tgc Cys | ccc Pro | cct Pro | gga Gly | ccc Pro 335 | tgt Cys | 1008 |
| tgc Cys | tac Tyr | cct Pro | gcc Ala 340 | cca Pro | cac His | tat Tyr | gct Ala | cca Pro 345 | gcg Ala | tgc Cys | cag Gln | gac Asp | cag Gln 350 | gag Glu | tgt Cys | 1056 |
| | | | atg Met | | | Ala | | | | | | | | | | 1104 |

| | | g cct u Pro | | | | | | | | | | | | | | 1131 |
|------------------------------|------------|---------------------------|-------------------|-----------------|------------|------------|-------------------|-------------------|------------------|------------|------------|-------------------|-------------------|------------------|------------|------|
| <21 <21 <21 <21 | 1> 2> | 42 402 DNA Homo | sap | iens | | | | | | | | | | | | |
| <22 <22 <22 | 1> | exon | | 2) | | | | | | | | | | | | |
| <40 atg Met 1 | ccc | 42 agc Ser | ggc Gly | tgc Cys 5 | cgc Arg | tgc Cys | ctg Leu | cat His | ctc Leu 10 | gtg Val | tgc Cys | ctg Leu | ttg Leu | tgc Cys 15 | att Ile | 48 |
| | | g gct 7 Ala | | | | | | | | | | | | | | 96 |
| tgt Cys | gac | ctg Leu 35 | gcc Ala | cac His | ggc Gly | tgc Cys | tgt Cys 40 | gca Ala | cct Pro | gac Asp | Gly | tcc Ser 45 | tgc Cys | agg Arg | tgt Cys | 144 |
| | | ggc Gly | | | | | | | | | | | | | | 192 |
| | | cag Gln | | | | | | | | | | | | | | 240 |
| | | tgg Trp | | | | | | | | | | | | | | 288 |
| acg Thr | caç Gln | tcc Ser | ccc Pro 100 | tgc Cys | cag Gln | aat Asn | gga Gly | ggc Gly 105 | cag Gln | tgc Cys | atg Met | tat Tyr | gac Asp 110 | GJA aaa | ggc Gly | 336 |
| ggt Gly | gag Glu | tac Tyr 115 | cat His | tgt Cys | gtg Val | tgc Cys | tta Leu 120 | cca Pro | Gly | ttc Phe | cat His | ggg Gly 125 | cgt Arg | gac Asp | tgc Cys | 384 |
| | | aag Lys | | | | | | | | | | | | | | 402 |
| <210 <211 <212 <213 | l> 2> | 43 1199 DNA Homo | sapi | .ens | | | | | | | | | | | | |

| <22 <22 <22 | 1> | exon (37) | (1 | 185) | | | | | | | | | | | | |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----|
| <40 tcc | | 43 gtc | cgtc | cctc | ct g | gggc | cggc | g ct | gacc | | | | | | egc Arg | 54 |
| tgc Cys | ctg Leu | cat His | ctc Leu 10 | gtg Val | tgc Cys | ctg Leu | ttg Leu | tgc Cys 15 | att Ile | ctg Leu | Gly | gct Ala | ccc Pro 20 | ggt Gly | cag Gln | 102 |
| cct Pro | gtc Val | cga Arg 25 | gcc Ala | gat Asp | gac Asp | tgc Cys | agc Ser 30 | tcc Ser | cac His | tgt Cys | gac Asp | ctg Leu 35 | gcc Ala | cac His | ggc Gly | 150 |
| tgc Cys | tgt Cys 40 | gca Ala | cct Pro | gac Asp | ggc | tcc Ser 45 | tgc Cys | agg Arg | tgt Cys | gac Asp | ccg Pro 50 | ggc | tgg Trp | gag Glu | ggg Gly | 198 |
| ctg Leu 55 | cac His | tgt Cys | gag Glu | cgc Arg | tgt Cys 60 | gtg Val | agg Arg | atg Met | cct Pro | ggc Gly 65 | tgc Cys | cag Gln | cac His | ggt Gly | acc Thr 70 | 246 |
| tgc Cys | cac His | cag Gln | cca Pro | tgg Trp 75 | cag Gln | tgc Cys | atc Ile | tgc Cys | cac His 80 | agt Ser | ggc Gly | tgg Trp | gca Ala | ggc Gly 85 | aag Lys | 294 |
| ttc Phe | tgt Cys | gac Asp | aaa Lys 90 | gat Asp | gaa Glu | cat His | atc Ile | tgt Cys 95 | acc Thr | acg Thr | cag Gln | tcc Ser | ccc Pro 100 | tgc Cys | cag Gln | 342 |
| aat Asn | gga Gly | ggc Gly 105 | cag Gln | tgc Cys | atg Met | tat Tyr | gac Asp 110 | Gly ggg | ggc Gly | ggt Gly | gag Glu | tac Tyr 115 | cat His | tgt Cys | gtg Val | 390 |
| tgc Cys | tta Leu 120 | cca Pro | ggc Gly | ttc Phe | cat His | ggg Gly 125 | cgt Arg | gac Asp | tgc Cys | gag Glu | cgc Arg 130 | aag Lys | gct Ala | gga Gly | ccc Pro | 438 |
| tgt Cys 135 | gaa Glu | cag Gln | gca Ala | ggc Gly | tcc Ser 140 | cca Pro | tgc Cys | ege Arg | aat Asn | ggc Gly 145 | gly Gly | cag Gln | tgc Cys | cag Gln | gac Asp 150 | 486 |
| gac Asp | cag Gln | ggc Gly | ttt Phe | gct Ala 155 | ctc Leu | aac Asn | ttc Phe | acg Thr | tgc Cys 160 | cgc Arg | tgc Cys | ttg Leu | gtg Val | ggc Gly 165 | ttt Phe | 534 |
| gtg Val | ggt Gly | gcc Ala | ege Arg 170 | tgt Cys | gag Glu | gta Val | aat Asn | gtg Val 175 | gat Asp | gac Asp | tgc Cys | ctg Leu | atg Met 180 | cgg Arg | cct Pro | 582 |
| tgt Cys | gct Ala | aac Asn 185 | ggt Gly | gcc Ala | acc Thr | tgc Cys | ctt Leu 190 | gac Asp | ggc Gly | ata Ile | aac Asn | cgc Arg 195 | ttc Phe | tcc Ser | tgc Cys | 630 |
| ctc | tgt | cct | gag | ggc | ttt | gct | gga | cgc | ttc | tgc | acc | atc | aac | ctg | gat | 678 |

| | | | | | | | | | 35 | | | | | | | ARS.113 |
|------------------------------|------------|------------------------|-------------------|-------------------|-------------------|------------|-------------------|-------------------|-------------------|-------------------|------------|-------------------|-------------------|-------------------|-------------------|---------|
| Leu | Cys 200 | Pro | Glu | Gly | Phe | Ala 205 | Gly | Arg | Phe | Cys | Thr 210 | Ile | Asn | Leu | Asp | |
| gac Asp 215 | tgt Cys | gcc Ala | agc Ser | cgc Arg | cca Pro 220 | tgc Cys | cag Gln | aga Arg | ggg Gly | gcc Ala 225 | cgc Arg | tgt Cys | cgg Arg | gac Asp | cgt Arg 230 | 726 |
| gtc Val | cac His | gac Asp | ttc Phe | gac Asp 235 | tgc Cys | ctc Leu | tgc Cys | ccc Pro | agt Ser 240 | Gly | tat Tyr | ggt Gly | ggc Gly | aag Lys 245 | acc Thr | 774 |
| tgt Cys | gag Glu | ctt Leu | gtc Val 250 | tta Leu | cct Pro | gtc Val | cca Pro | gac Asp 255 | ccc Pro | cca Pro | acc Thr | aca Thr | gtg Val 260 | gac Asp | acc Thr | 822 |
| cct Pro | cta Leu | ggg Gly 265 | ccc Pro | acc Thr | tca Ser | gct Ala | gta Val 270 | gtg Val | gta Val | cct Pro | gcc Ala | acg Thr 275 | ggg Gly | cca Pro | gcc Ala | 870 |
| | | agc Ser | | | | | | | | | | | | | | 918 |
| | | agg Arg | | | | | | | | | | | | | | 966 |
| | | ttt Phe | | | | | | | | | | | | | | 1014 |
| | | ctg Leu | | | | | | | | | | | | | - | 1062 |
| | | cct Pro 345 | | | | | | | | | | | | | | 1110 |
| | | agc Ser | | | | | | | | | | | | | | 1158 |
| | | cct Pro | | | | | | | tgat | ggag | ıgt g | iggg | | | | 1199 |
| <210 <211 <212 <213 | > 1 > E | 4 062 NA Iomo | sapi | ens | | | | | | | | | | | | |
| <220 <221 <222 | > e | xon 4) | (105 | 8) | | | | | | | | | | | | |
| <400 acc | | 4 ccc | agc | ggc | tgc | cgc | tgc | ctg | cat | ctc | gtg | tgc | ctg | ttg | tgc | 48 |

| | | | | | | | | | 36 | | | | | | | ARS.113 |
|------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|-------------------|-------------------|-------------------|------------------|------------------|-------------------|-------------------|-------------------|------------------|---------|
| | Met 1 | Pro | Ser | Gly | Cys 5 | Arg | Cys | Leu | His | Leu 10 | Val | Cys | Leu | Leu | Cys 15 | |
| att Ile | ctg Leu | ggg Gly | gct Ala | ccc Pro 20 | ggt Gly | cag Gln | cct Pro | gtc Val | cga Arg 25 | gcc Ala | gat Asp | gac Asp | tgc Cys | agc Ser 30 | tcc Ser | 96 |
| cac His | tgt Cys | gac Asp | ctg Leu 35 | gcc Ala | cac His | ggc Gly | tgc Cys | tgt Cys 40 | gca Ala | cct Pro | gac Asp | ggc Gly | tcc Ser 45 | tgc Cys | agg Arg | 144 |
| tgt Cys | gac Asp | ccg Pro 50 | ggc Gly | tgg Trp | gag Glu | Gly | ctg Leu 55 | cac His | tgt Cys | gag Glu | ege Arg | tgt Cys 60 | gtg Val | agg Arg | atg Met | 192 |
| cct Pro | ggc Gly 65 | tgc Cys | cag Gln | cac His | ggt Gly | acc Thr 70 | tgc Cys | cac His | cag Gln | cca Pro | tgg Trp 75 | cag Gln | tgc Cys | atc Ile | tgc Cys | 240 |
| cac His 80 | agt Ser | ggc Gly | tgg Trp | gca Ala | ggc Gly 85 | aag Lys | ttc Phe | tgt Cys | gac Asp | aaa Lys 90 | ggc | ttc Phe | cat His | Gly aaa | cgt Arg 95 | 288 |
| gac Asp | tgc Cys | gag Glu | cgc Arg | aag Lys 100 | gct Ala | gga Gly | ccc Pro | tgt Cys | gaa Glu 105 | cag Gln | gca Ala | ggc | tcc Ser | cca Pro 110 | tgc Cys | 336 |
| cgc Arg | aat Asn | ggc Gly | ggg Gly 115 | cag Gln | tgc Cys | cag Gln | gac Asp | gac Asp 120 | cag Gln | ggc Gly | ttt Phe | gct Ala | ctc Leu 125 | aac Asn | ttc Phe | 384 |
| acg Thr | tgc Cys | cgc Arg 130 | tgc Cys | ttg Leu | gtg Val | ggc Gly | ttt Phe 135 | gtg Val | ggt Gly | gcc Ala | cgc Arg | tgt Cys 140 | gag Glu | gta Val | aat Asn | 432 |
| | gat Asp 145 | | | | | | | | | | | | | | | 480 |
| | ggc ggc | | | | | | | | | | | | | | | 528 |
| cgc Arg | ttc Phe | tgc Cys | acc Thr | atc Ile 180 | aac Asn | ctg Leu | gat Asp | gac Asp | tgt Cys 185 | gcc Ala | agc Ser | cgc Arg | cca Pro | tgc Cys 190 | cag Gln | 576 |
| | Gly aaa | | | | | | | | | | | | | | | 624 |
| | agt Ser | | | | | | | | | | | | | | | 672 |
| | ccc Pro 225 | | | | | | | | | | | | | | | 720 |

| 37 | ARS.113 |
|---|---------|
| gtg gta cet gee aeg ggg eea gee eee eae age gea ggg get ggt etg Val Val Pro Ala Thr Gly Pro Ala Pro His Ser Ala Gly Ala Gly Leu 240 245 250 255 | 768 |
| ctg cgg atc tca gtg aag gag gtg gtg cgg agg caa gag gct ggg cta Leu Arg Ile Ser Val Lys Glu Val Val Arg Arg Gln Glu Ala Gly Leu 260 265 270 | 816 |
| ggt gag cct age ttg gtg gcc ctg gtg gtg ttt ggg gcc ctc act gct Gly Glu Pro Ser Leu Val Ala Leu Val Val Phe Gly Ala Leu Thr Ala 275 280 285 | 864 |
| gcc ctg gtt ctg gct act gtg ttg ctg acc ctg agg gcc tgg cgc cgg Ala Leu Val Leu Ala Thr Val Leu Leu Thr Leu Arg Ala Trp Arg Arg 290 295 300 | 912 |
| ggt gtc tgc ccc cct gga ccc tgt tgc tac cct gcc cca cac tat gct Gly Val Cys Pro Pro Gly Pro Cys Cys Tyr Pro Ala Pro His Tyr Ala 305 310 315 | 960 |
| cca gcg tgc cag gac cag gag tgt cag gtt agc atg ctg cca gca ggg Pro Ala Cys Gln Asp Gln Glu Cys Gln Val Ser Met Leu Pro Ala Gly 320 325 330 335 | 1008 |
| ctc ccc ctg cca cgt gac ttg ccc cct gag cct gga aag acc aca gca Leu Pro Leu Pro Arg Asp Leu Pro Pro Glu Pro Gly Lys Thr Thr Ala 340 345 350 | 1056 |
| ct gtga | 1062 |